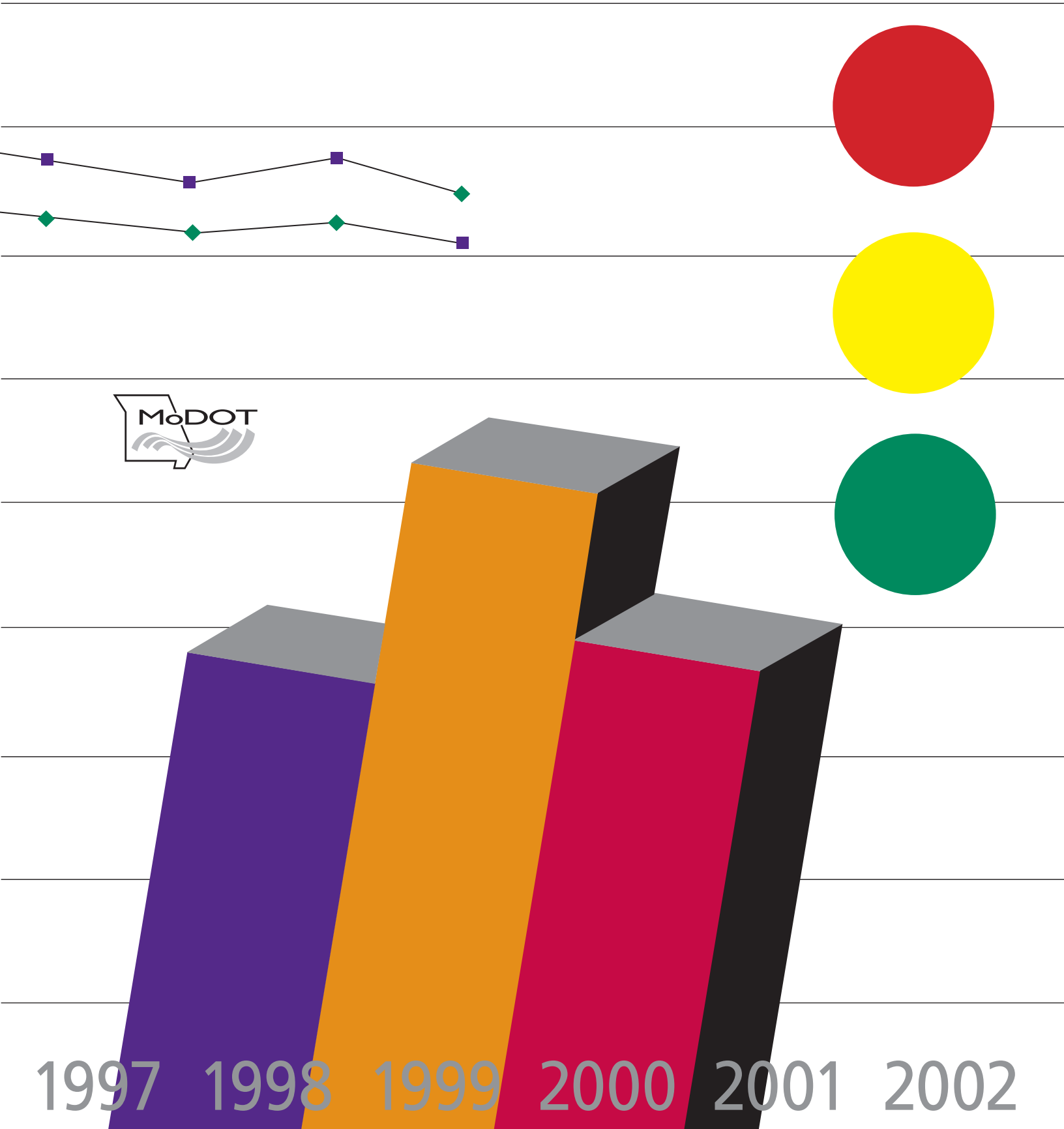


# MoDOT Dashboard

Measurements of Performance



# MoDOT Dashboard

## Measurements of Performance

Establishing effective performance management to focus on positive business results can transform an agency into a customer-driven government organization that significantly improves its operation to achieve remarkable success.

MoDOT Dashboard is a semiannual report that will allow the department to assess their overall progress and demonstrate accountability.

**Our Mission Is:**

**Taking care of and improving  
Missouri's transportation system**

"Performance measurement is a critical function for MoDOT and we have made considerable progress managing the taxpayers' money wisely as it relates to transportation. We will continue to look for efficiencies in our operations."



**Henry Hungerbeeler**

**Director**

**Missouri Department of Transportation**

# MoDOT Dashboard

## Executive Summary

Performance measurement is not new to MoDOT. In July 2001, MoDOT staff began completing quarterly performance reports to provide management with information to assess the strategic plan (<http://www.modot.state.mo.us/about/strategicplan.htm>) and how it was being used. These performance reports allowed department leaders to manage resources and performance better. They showed progress was being made toward the goals and specific strategies in the department's strategic and business plans. But that was just the start.

Since then, the process has matured. Through additional work by department leaders at all levels and review by an external stakeholder focus group, the organizational measures were refined and compiled into a new system called the MoDOT Dashboard. The dashboard covers several outcome-oriented measurements that department management, the focus group and the Missouri Highways and Transportation Commission believe are key to MoDOT's future success. Dashboard measures directly correlate to the three strategic priorities in the MoDOT Strategic Plan: "take better care of what we have", "finish what we've started", and "build public trust".

The dashboard's is reported semiannually, which allows the department to continually assess its overall progress and demonstrate accountability to its stakeholders. The measures shown are much like the dashboard in cars; they show, at a glance, how well MoDOT is performing. The dashboard metrics focus on critical outcomes that MoDOT is committed to improving, such as pavement condition, how well we are delivering our STIP, and customer satisfaction. The data within the Dashboard are assessed for completeness and accuracy prior to each publication.





The performance measurement process is driven down further into each operational level of MoDOT, with more process and output measures that are critical to the success of the strategy deployment in the business plan. These measures are reported quarterly to senior leaders on "scorecards." They focus on day-to-day operations within MoDOT and how well strategies are executed, e.g. number of signals observed and percent of change per finalized construction contracts. The dashboard provides a balanced approach when used in conjunction with operational scorecards and individual employee performance management plans. This approach helps MoDOT use performance measures to better manage the state transportation business and help people understand issues that affect MoDOT.













*For more information, contact Mara Campbell, strategic planning and policy manager, at 573-526-2908. To view the Dashboard or Strategic Plan online, visit the MoDOT website under General Information at <http://www.modot.state.mo.us/about/>.*





# MoDOT Dashboard

*Revised January 30, 2004*

**KEY:**

-  (G) – The target was met or exceeded (for the time period in which data is collected)
-  (Y) – The trend was positive, but the target was not met (or not target established)
-  (R) – The trend was negative and the target was not met (or no target established)
-  (W) – The measure is under development.

Performance Measure	Trend	Comments
<b>Take better care of what we have</b>		
Traffic fatality and injury crash rates compared to national average	Y 	While the MO 2002 trend for injury crash rate is meeting the performance goal, the fatality crash rate is increasing and is still higher than the national rate. (Pages 1 & 2)
State system traffic fatality and injury crash trend	Y 	While the five-year trend for injury crash rates have shown a steady decline, fatality crash rates have increased. (Pages 3 & 4)
Percent of major highway miles in good or better condition	R 	There has been a decrease of major highway miles in good or better condition since 2000 (Pages 5 & 6)
Percent of deficient bridges	Y 	Although statistics show a decrease in the percentage of deficient bridges on the state system, there is still a significant gap in the deficiency on the state system compared to all states (Page 7)
Roadway Congestion Index (RCI) for Kansas City and St. Louis compared to national average	Y 	Both Kansas City and St. Louis are currently below the national trend for RCI, but the trend in Kansas City is increasing (Pages 8 & 9)
Percentage of statewide striping program completed	W 	New measure – in the process of compiling data. Calendar Year 2003 data will be included in the next update in mid July 2004. (Page 10)
Mowing costs vs. herbicide costs	G 	Costs were above baseline for the herbicide program and below the baseline for the mowing program for Calendar Years 2000 - 2002. Calendar Year 2003 data will be included in the next update in mid July 2004. (Pages 11 & 12)
Net assets at year end	G 	Net assets remain stable or increase at FY 2003 year end (Page 13)
<b>Finish what we've started</b>		
Percentage of dollars delivered as programmed	Y 	Result was 93% of dollars delivered based on progress to date in SFY 2004 (Page 14)
Percentage of projects delivered as programmed	G 	Delivered 95% of projects for SFY 2003 (Page 15)
Percentage of projects delivered on time	R 	Target was not met (Page 16)
Percentage of dollars spent on completed projects delivered within budget	G 	Result was within the range of $\geq 97\%$ and $\leq 103\%$ of programmed dollars (Page 17)

<b>Build public trust</b>		
Percent of customer satisfaction	Y 	Data from 2003 Annual Survey reflects 68 percent satisfaction (Page 18)
Percent of funding level target utilized by programmed projects by category for the current year of the STIP	G 	“Taking care of the system” and “Statewide rural major projects” programmed funding level $\geq 95\%$ of their respective established targets and total programmed funding level $\geq 95\%$ and $\leq 105\%$ of the total established target. (Page 19 & 20)
Distribution of funds	G 	FY 2003 indicates construction and maintenance expenditures continue to comprise the largest expenditures of the department (Page 21)
Revenue dispersion	G 	Revenue dispersion remains relatively constant. (Page 22)

## Take Better Care of What We Have

### *Traffic fatality and injury crash rates compared to national average*

**Strategic Goal:**

Improve safety on the transportation system

**Performance Goal/Target:**

The goal is for Missouri's state system fatality and injury crash rates to be less than the national fatality and injury crash rates

**Desired Trend:**

**Results:** ● (Y) While the MO 2002 trend for injury crash rate is meeting the performance goal, the fatality crash rate is increasing and is still higher than the national rate.

**Last Update:** 01/05/2004

- Green - Both fatality and injury crash rates for Missouri are less than the national fatality and injury crash rates.
- Yellow - Only one of Missouri's crash rates, fatality or injury, is lower than the national fatality and injury crash rates.
- Red - Both fatality and injury crash rates for Missouri are more than the national fatality and injury crash rates.

**Performance Measures:**

- (1) Number of Missouri State System Fatality Crashes per Hundred Million Vehicle Miles (HMVM)
- (2) Number of Missouri State System Injury Crashes per Hundred Million Vehicle Miles (HMVM)
- (3) National Fatality Crash Rate per HMVM
- (4) National Injury Crash Rate per HMVM

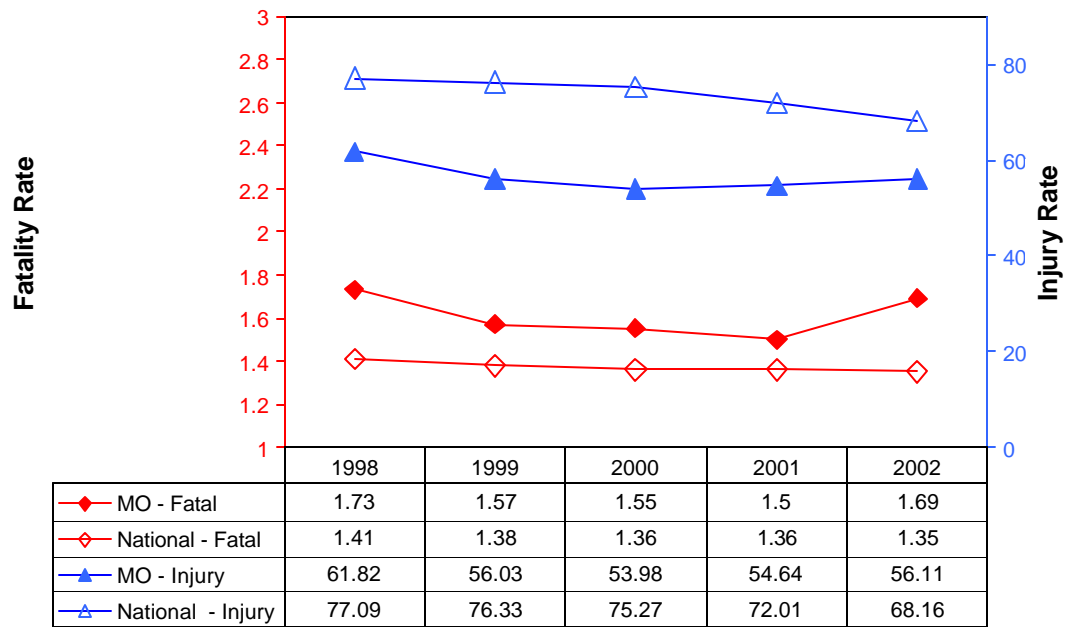
**Additional Information:**

MoDOT's fatality and injury crash rates are for the last complete year of data available in TMS (year 2002). The information comes directly from the report titled, "Accident and Rates by Route Marking – Statewide".

The national statistics come from the "Traffic Safety Facts 2002: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System", published by USDOT – National Highway Traffic Safety Administration.

## Fatality and Injury Crash Rates

(state system compared to national average)



## Take Better Care of What We Have

### *State system traffic fatality and injury crash trend*

**Strategic Goal:**

Improve safety on the transportation system

**Performance Goal/Target:**

The goal is to decrease fatality and injury crash trends on all Missouri roads.

**Desired Trend:**

**Results:** ● (Y) While the five-year trend for injury crash rates have shown a steady decline, fatality crash rates have increased.

**Last Update:** 01/05/2004

Green - Both fatality and injury crash rates for Missouri show a downward trend

Yellow - Only one of Missouri's crash rates, fatality or injury, is a downward trend

Red - Both fatality and injury crash rates for Missouri show an upward trend

**Performance Measures:**

- (1) Five-year trend of fatality totals for all Missouri roads
- (2) Five-year trend of injury totals for all Missouri roads

**Additional Information:**

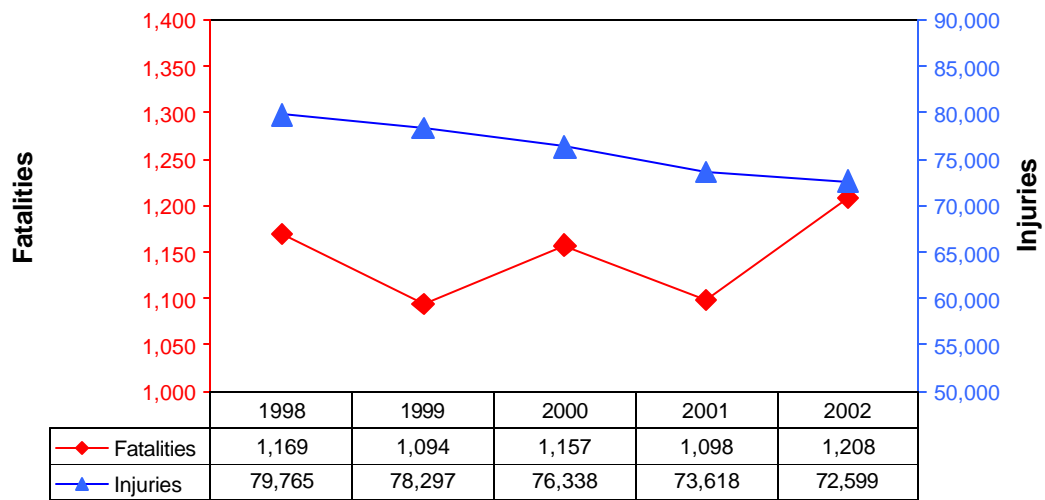
The Missouri State Highway Patrol (MSHP) compiles fatality and injury totals for all Missouri roads on a yearly basis. The fatality and injury totals come directly from the MSHP report titled, "Statistical Analysis Center – 2001 Missouri Traffic Safety Compendium".

Fatality and injury information is not used for planning purposes since it is dependent on the number of fatalities and injuries per fatality accident and injuries per injury accident, not the number of fatal and injury crashes. Fatality and injury accident rates are reported in another dashboard measure. Fatality and injury accident rates are dependent on the total number of fatality and injury crashes, which we can more easily influence.



## Fatalities and Injuries

(all Missouri roads)



## Take Better Care of What We Have

### *Percent of major highway miles in good or better condition*

**Strategic Goal:**

Improve the condition of the state's roads and bridges

**Performance Goal/Target:**

Increase the number of miles considered in good or better condition to:

50 percent on National Highway System (NHS) and remaining arterials with the additional stipulation that 85 - 90 percent of the Interstate must meet the condition goal

Green - Greater than 1 percent increase

Yellow - 0-1 percent increase

Red - Any decrease

**Performance Measures:**

Lane miles of pavement that meet the desired condition measure, based on the International Roughness Index (IRI)

**Additional Information:**

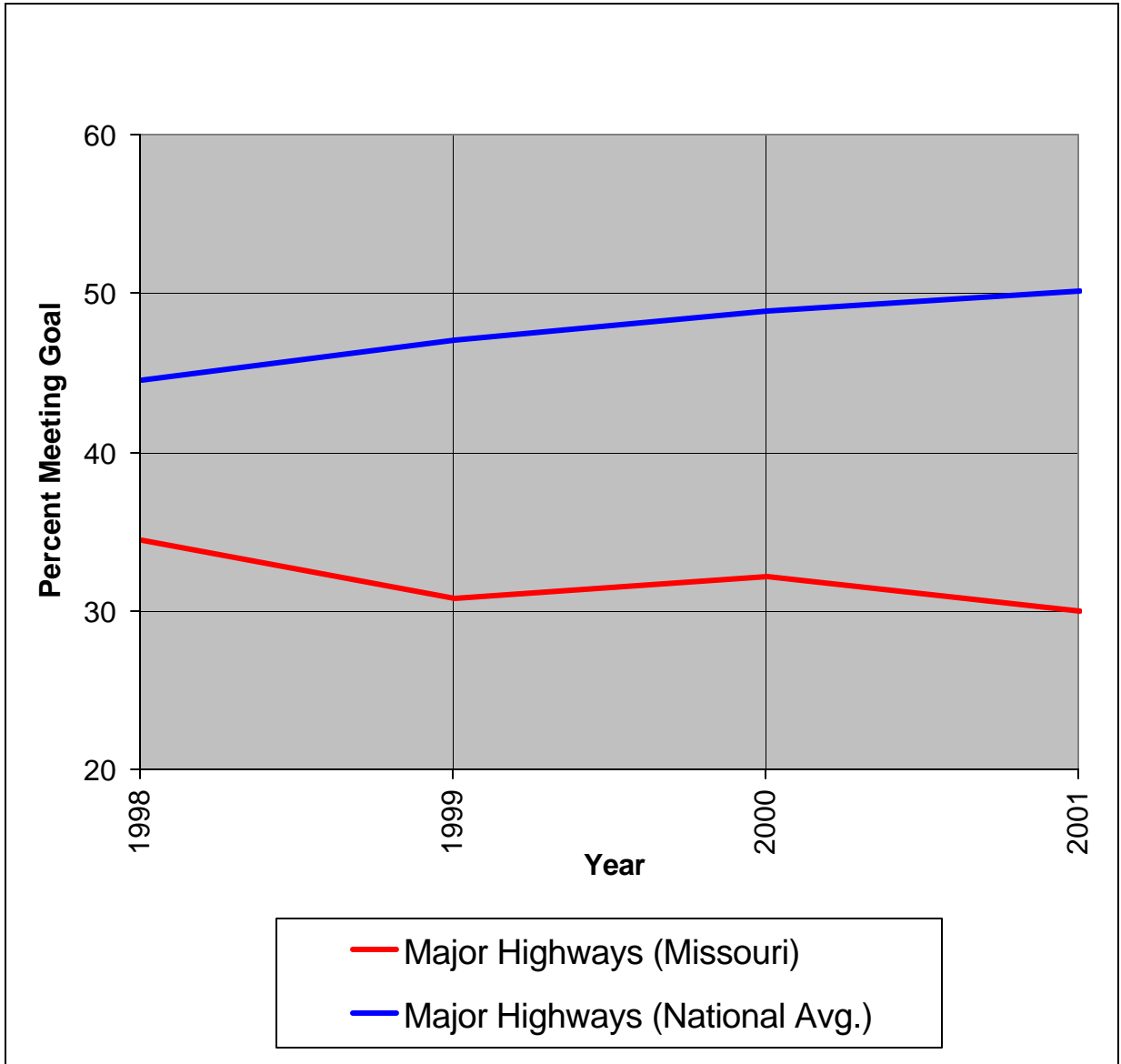
"Major Highways" are defined as those functionally classified as "Arterials". This includes the Interstate system, the National Highway System (NHS), and in general the numbered routes, such as US 63, US 54, US 65, US 60, etc.

The IRI is an internationally accepted measure of pavement smoothness. It is collected annually on all arterial pavements (this includes the Interstate and NHS). An Automatic Road Analyzer operated by Transportation Planning performs this task. IRI is a non-subjective measure of roughness that is also used to report roughness to the Federal Highway Administration for inclusion in the Highway Performance Monitoring System and is thus available for use in comparisons to surrounding states. It has shown good correlation to public perception of pavement quality and to the physical condition of pavements as well.

**Desired Trend:**

**Results:** ● (R) There has been a decrease of major highway miles in good or better condition since 2000.

**Last Update:** 03/04/2003



Note: All percentages for Missouri Major Highways calculated using 0.02 mile segments from ARAN data using average IRI values. Average for National Highways from FHWA Highway Statistics Manual based on IRI.

## Take Better Care of What We Have

### *Percent of deficient bridges*

#### **Strategic Goal:**

Improve the condition of the state's roads and bridges

#### **Performance Goal/Target:**

Reduce the number of deficient bridges

Green - Greater than 1.0 percent decrease

Yellow - 0 – 1.0 percent reduction

Red - Greater than 1.0 percent increase

#### **Performance Measures:**

Percent of deficient bridges on the state system

#### **Additional Information:**

Deficient structures are determined using Federal Highway Administration criteria for all structures submitted as part of the National Bridge Inventory. This analyses is based on load capacity, physical condition and geometrics. Structures are determined to be either structurally deficient or functionally obsolete. In general deficient structures are no longer considered to be adequate to serve the needs of the public due to poor condition, insufficient load capacity, insufficient roadway width or insufficient clearances.

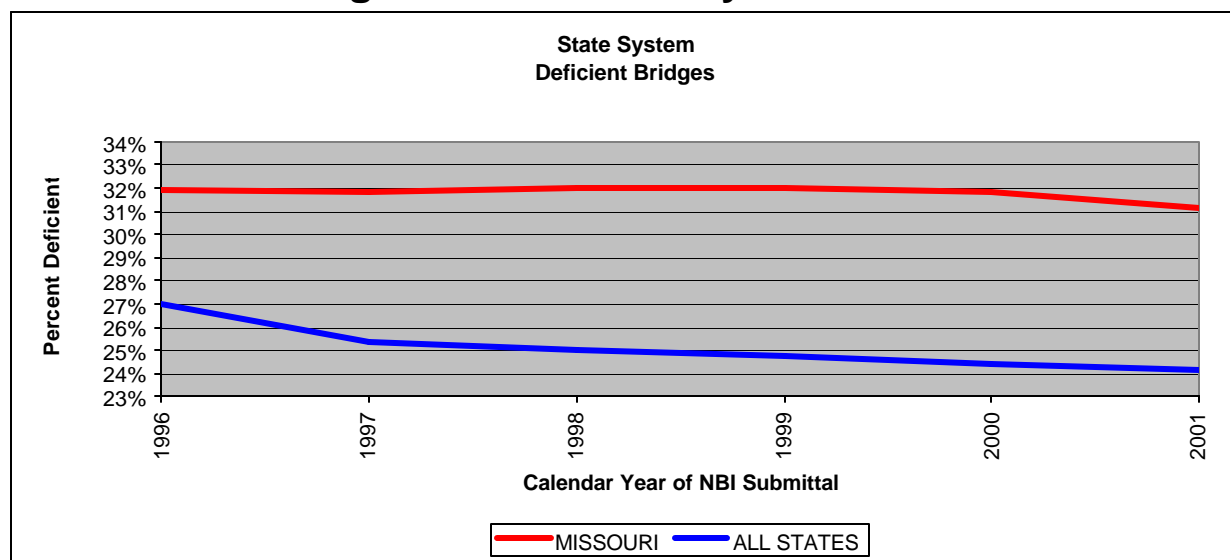
**Desired Trend:**



**Results:** ● (Y) Although statistics show a decrease in the percentage of deficient bridges on the state system, there is still a significant gap in the deficiency on the state system compared to all states.

**Last Update:** 03/04/2003

## Percent of Bridges on the State System that are Deficient



## Take Better Care of What We Have

### *Roadway Congestion Index for Kansas City and St. Louis compared to national average*

**Strategic Goal:**

Improve safety on the transportation system

**Performance Goal/Target:**

The goal is to keep the trend for Roadway Congestion Index (RCI) below the national trend for “large urban areas”. The RCI estimates congestion levels using a formula that measures the density of traffic within a Metropolitan Planning Organization (MPO).

**Desired Trend:**

**Results:** ● (Y) Both Kansas City and St. Louis are currently below the national trend for RCI, but the trend in Kansas City is increasing.

**Last Update:** 01/02/2004

- Green - Both St. Louis and Kansas City MPOs are below the national trend for “large urban areas” and the trend indicates a decrease in both areas
- Yellow - Both St. Louis and Kansas City MPOs are below the national trend for “large urban areas” but the trend indicates an increase in one or both areas
- Red - If either St. Louis or Kansas City MPOs is above the national trend for “large urban areas”

**Performance Measures:**

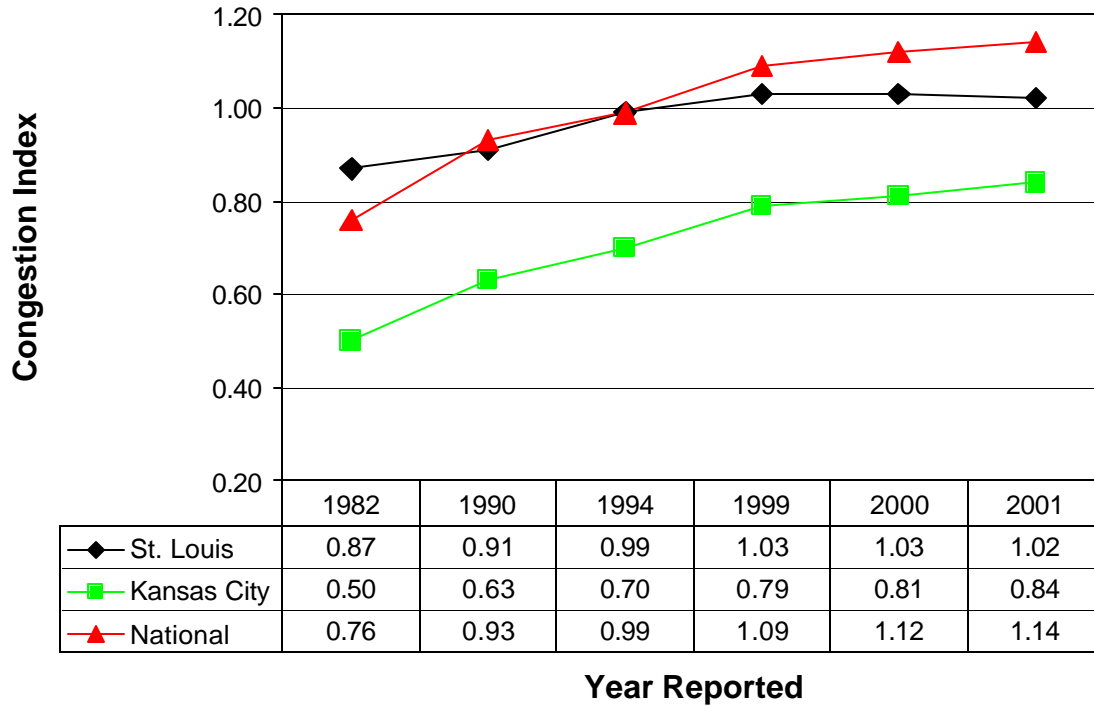
St. Louis and Kansas City MPO area and national trend lines for RCI

**Additional Information:**

The St. Louis and Kansas City boundaries include external state data (Illinois and Kansas respectively; MPO regions). Each region will also include state and non-state routes. Both regions are compared to “large urban area” categories. The data was obtained from Exhibit A-19 of “The 2003 Urban Mobility Report” published by Texas Transportation Institute (TTI). The reported years are based on available data from the referenced report and may not be available on a yearly basis. MoDOT does not produce any data in the report.

# Roadway Congestion Index

(St. Louis & Kansas City MPO vs. National Avg.)



## Take Better Care of What We Have

### *Percentage of statewide striping program completed*

**Strategic Goal:**

Improve the safety of Missouri's transportation system

**Performance Goal/Target:**

Centerline stripe on 100% of programmed line miles for calendar year 2003. Edgeline stripe on 100% of programmed line miles for calendar year 2003

**Desired Trend:** 100% completion of the program

**Results:** ○ (W) New measure – in the process of compiling data. Calendar Year 2003 data will be included in the next update in mid July 2004.

**Last Update:**

Green - *Measure under development – definition to be determined*

Yellow - *Measure under development – definition to be determined*

Red - *Measure under development – definition to be determined*

**Performance Measures:**

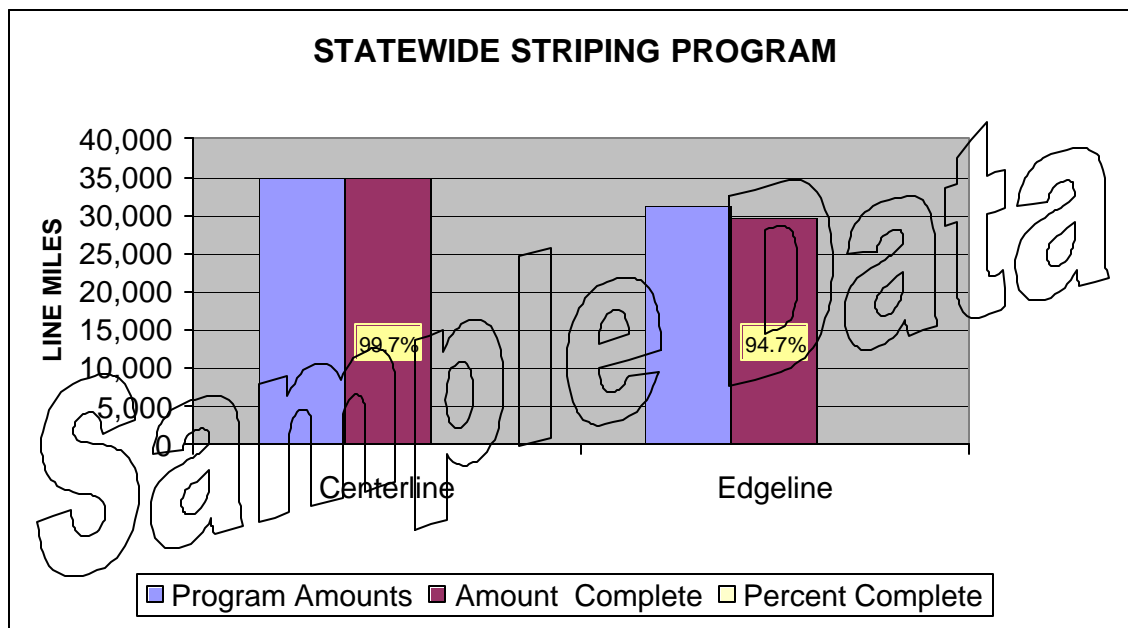
100% completion of striping for calendar year 2003

**Additional Information:**

Centerline stripe all roads

Edgeline stripe all roads > 1000 average daily traffic

*\*In process of gathering data – this is an example.*



## Take Better Care of What We Have

### *Mowing costs vs. herbicide costs*

#### **Strategic Goal:**

Improve maintenance of the state's highway system

#### **Performance Goal/Target:**

Remain below the baseline for mowing costs

Remain above the baseline for herbicide costs

Green - Mowing costs are below the baseline and herbicide costs are above the baseline

Yellow - Mowing costs and herbicide costs both increase and/or decrease

Red - Mowing costs are above the baseline and herbicide costs are below the baseline

**Desired Trend:** Remain below the baseline for mowing costs and remain above the baseline for herbicide costs.

**Results:** ● (G) Costs were above baseline for the herbicide program and below the baseline for the mowing program for Calendar Years 2000 - 2002. Calendar Year 2003 data will be included in the next update in mid July 2004.

**Last Update:** 03/31/2003

#### **Performance Measures:**

Mowing costs vs. herbicide costs

Because the expense of herbicides is more cost efficient, we will increase the usage of herbicides until it reaches the level at which it is no longer cost efficient.

#### **Additional Information:**

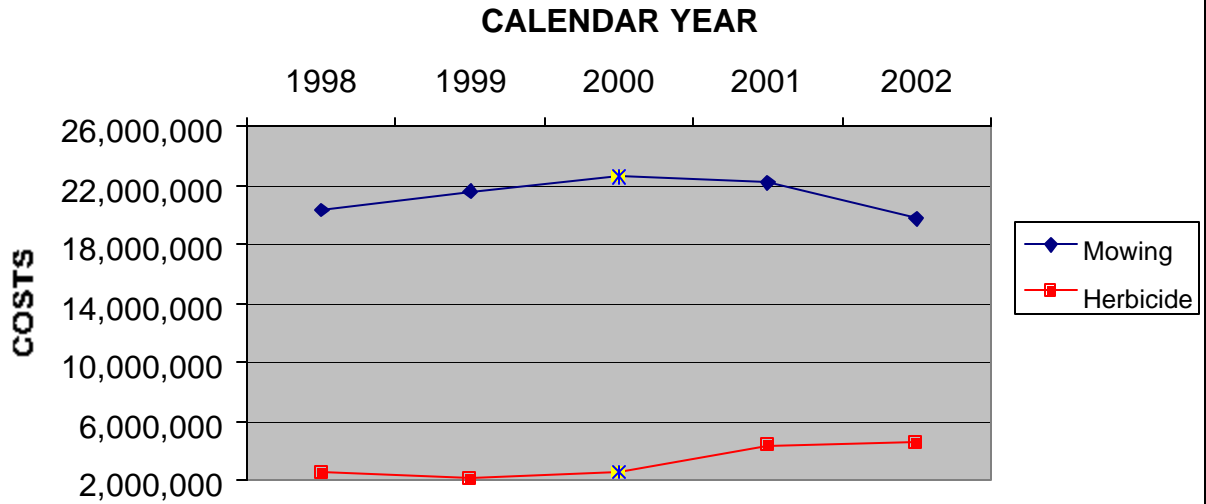
**The goal/target for the mowing program is to remain below the baseline.**

**The goal/target for the herbicide program is to remain above the baseline.**

(Calendar Year 2000 was chosen as the baseline due to the fact that a new mowing policy was put into place that year. The policy states that herbicides are to be used in order to reduce the need to mow.) The maximum amount of herbicide expense vs. mowing expense needed to reach the highest level of cost efficiency on roadside maintenance is unknown at this time. This level will be determined as we move forward with this measure.



## 5 YEAR HISTORY OF MoDOT'S MOWING & HERBICIDE COSTS PER CALENDAR YEAR



\*

Denotes baseline

## Take Better Care of What We Have

### *Net assets at year end*

#### **Strategic Goal:**

Demonstrate responsible use of taxpayers' money

#### **Performance Goal/Target:**

The department's overall financial condition will improve or remain steady over the past year.

**Desired Trend:** The department's overall financial condition will improve, or at a minimum, remain steady over the past year

**Results:** ● (G) Net assets remain stable or increase at year end

**Last Update:** 06/30/2003

Green - Net assets remain stable or increase at year end

Yellow - Net assets at year end are \$250 million - \$500 million less than previous year

Red - Net assets at year end are less than the previous year by \$500 million or more

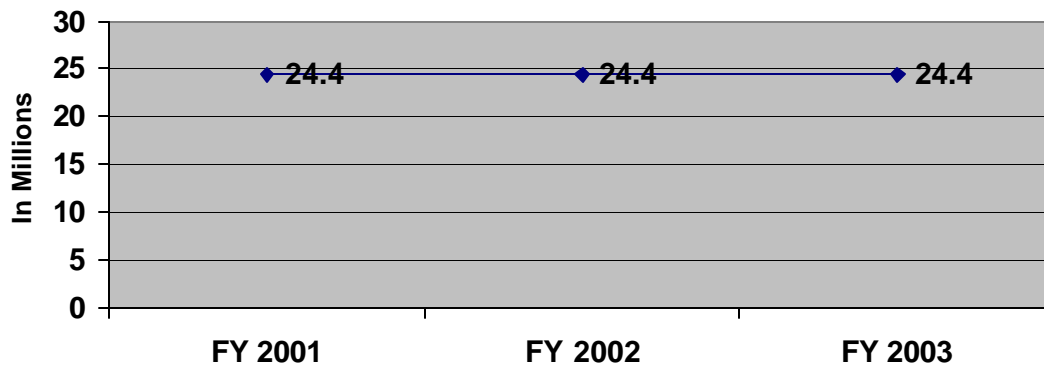
#### **Performance Measures:**

Net assets at year end

#### **Additional Information:**

Net assets, as reported below, include all assets of the department, including capital assets (with infrastructure), less all liabilities, including current liabilities and long-term bonds and other debt. Overall, the department's financial condition, as measured by its net assets, remained steady. Information related to assets was first available with the implementation of GASB 34 in FY 2002. Historical information prior to FY 2001 is not available.

### NET ASSETS AT YEAR END



## Finish What We've Started

### *Percentage of dollars delivered as programmed*

**Strategic Goal:**

Deliver the STIP on time and within budget

**Performance Goal/Target:**

Deliver projects within 95% - 105% of dollars programmed

**Desired Trend:** —→ 100%

**Results:** ● (Y) 93% of dollars delivered  
based on progress to date in SFY 2004

**Last Update:** 01/2004

Green -  $\geq 95\%$  and  $\leq 105\%$  of dollars programmed

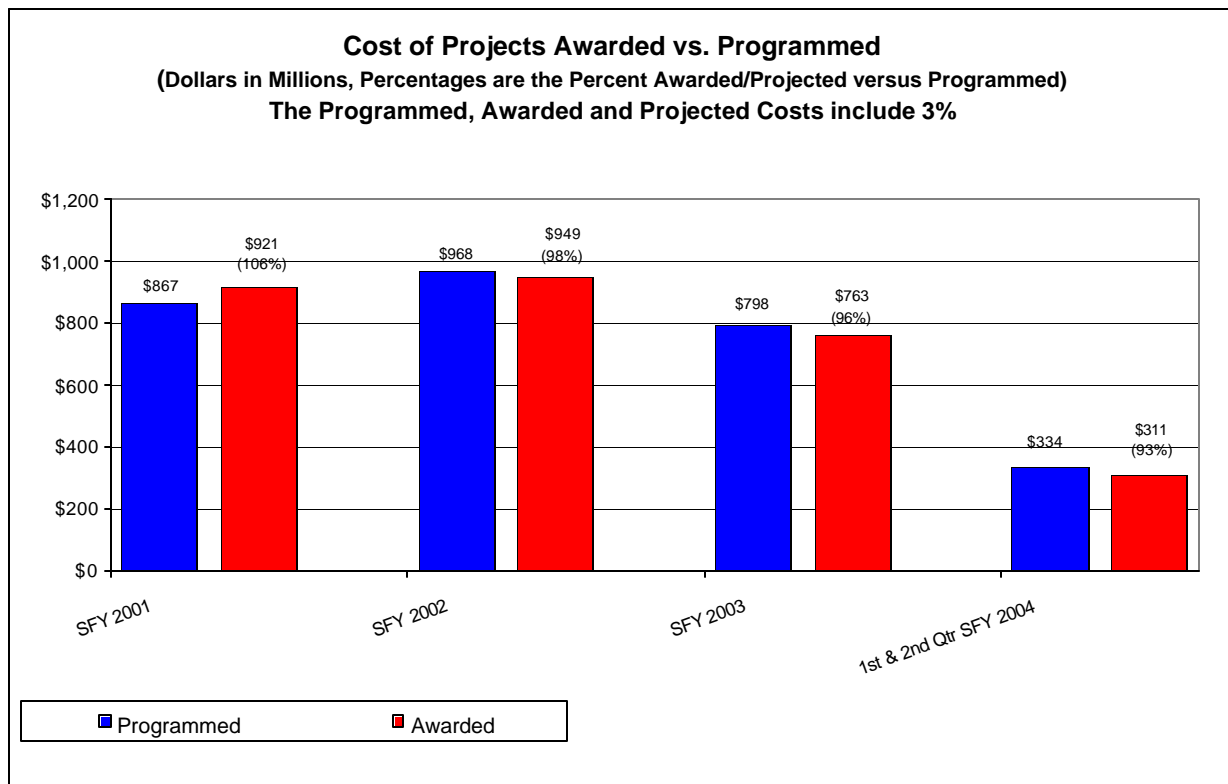
Yellow -  $\geq 90\%$  and  $\leq 110\%$  of dollars programmed

Red -  $< 90\%$  or  $> 110\%$  of dollars programmed

**Performance Measures:**

Percentage of dollars awarded compared to the dollars programmed for award in the same quarter of the current Statewide Transportation Improvement Program

**Additional Information:**



## Finish What We've Started

### *Percentage of projects delivered as programmed*

**Strategic Goal:**

Deliver the STIP on time and within budget

**Performance Goal/Target:**

Deliver projects  $\geq 95\%$  and  $\leq 105\%$  of the number of projects programmed

**Desired Trend:** —→ 100%

**Results:** ● (G) Delivered 95% of projects for SFY 2003

**Last Update:** 01/2004

Green -  $\geq 95\%$  and  $\leq 105\%$  of the number of programmed projects

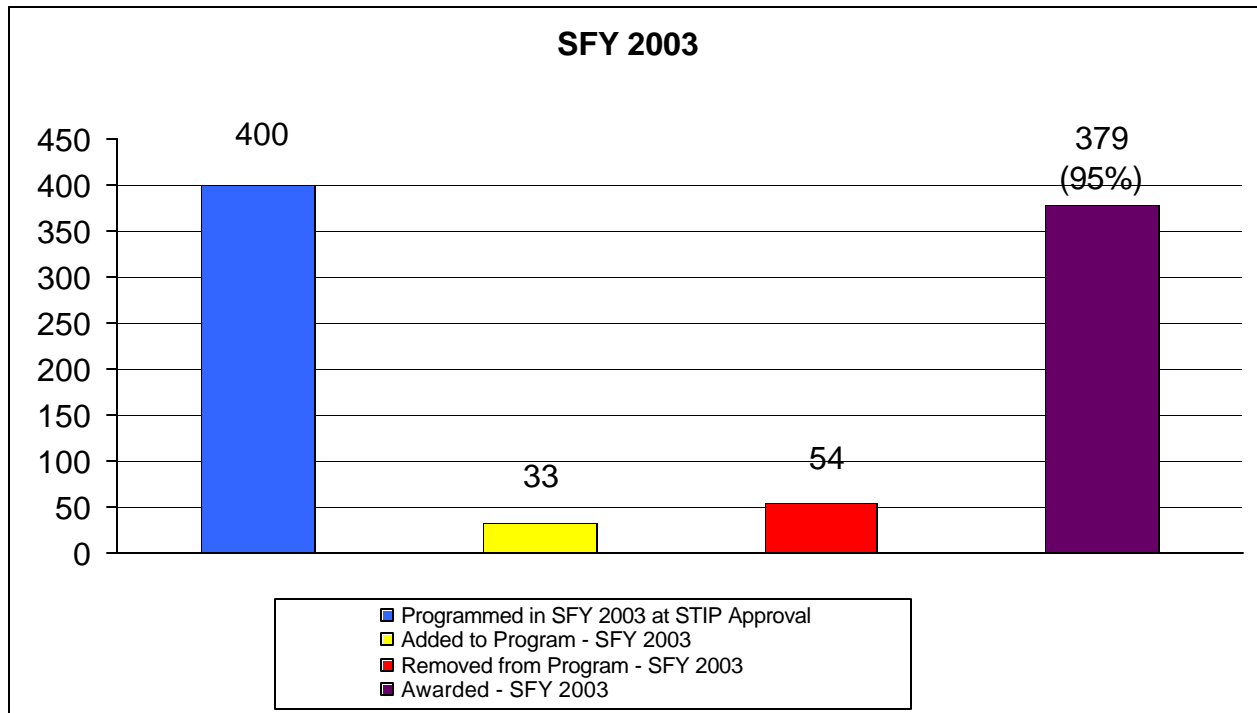
Yellow -  $\geq 90\%$  and  $\leq 110\%$  of the number of programmed projects

Red -  $< 90\%$  and  $> 110\%$  of the number of programmed projects

**Performance Measures:**

Percentage of the number of projects awarded in the same fiscal year as programmed in the current Statewide Transportation Improvement Program

**Additional Information:**



## Finish What We've Started

### *Percentage of projects delivered on time*

**Strategic Goal:**

Deliver the STIP on time and within budget

**Desired Trend:** 

**Results:** ● (R) Target was not met.

**Last Update:** 01/2004

**Performance Goal/Target:**

Shorten the time allowed to complete a project and distribute project awards strategically throughout the year.

Green - 85-100 percent on time

Yellow - 75-85 percent on time

Red - Less than 75 percent on time

**Performance Measures:**

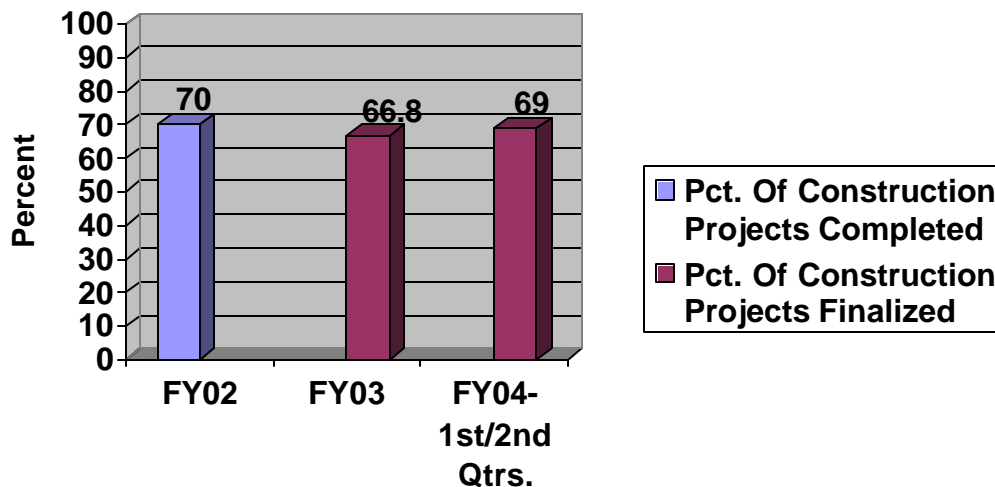
Percentage of projects completed on time as specified in the project contract

**Performance Measures:**

Percentage of projects completed on time as specified in the project contract

**Additional Information:**

For the first six months of FY04, 69 percent of all projects have been completed on time (120 of 174). The percentage for the second quarter of FY04, however, is 85.1 percent (86 of 101). It should be noted that MoDOT has delivered record levels of projects the last three years utilizing a stable number of contractors. As fewer projects are tackled in future years, on-time completion should improve. (Measure changed from Projects “completed” to Projects “finalized” at the start of FY03.)



## Finish What We've Started

### *Percentage of dollars spent on completed projects delivered within budget*

**Strategic Goal:**

Deliver the STIP on time and within budget

**Performance Goal/Target:**

To deliver good value for funds taxpayers invest in transportation

**Desired Trend:** —▶ 100%

**Results:** ● (G)  $\geq 97\%$  and  $\leq 103\%$  of programmed dollars

**Last Update:** 01/2004

Green -  $\geq 97\%$  and  $\leq 103\%$  of total programmed dollars

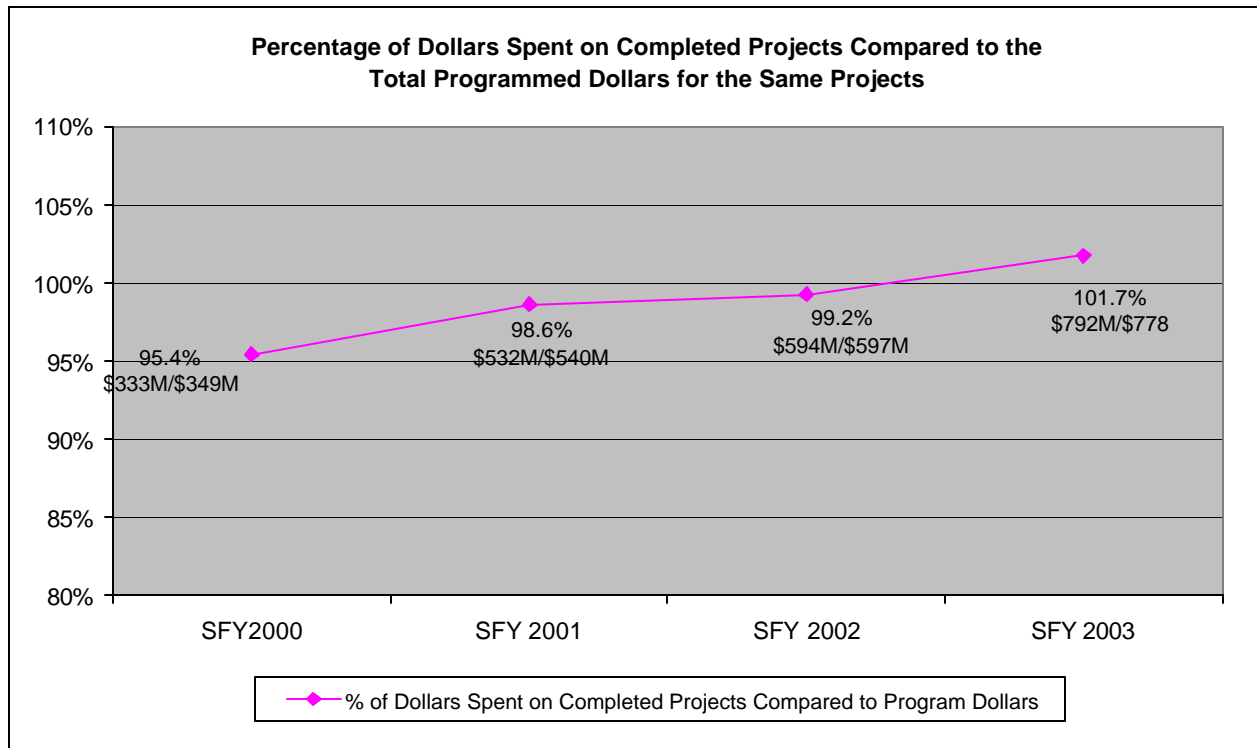
Yellow -  $\geq 95$  and  $\leq 105\%$  of total programmed dollars

Red -  $< 95\%$  or  $> 105\%$  of programmed dollars

**Performance Measures:**

Percentage of the annual total dollars spent on completed projects compared to the total programmed dollars for the same projects

**Additional Information:**



\*Please note, total dollars spent on completed projects are listed first, while programmed dollars are listed second.

## Build Public Trust

### *Percent of Customer Satisfaction*

#### **Strategic Goal:**

Listen and respond to the public

#### **Performance Goal/Target:**

The goal is to increase customer satisfaction with the overall performance of MoDOT. Target is 70 percent.

Green - 70 percent or above

Yellow - 50 to 69 percent

Red - 49 percent or below

#### **Performance Measures:**

Percent of customers rating MoDOT staff and services satisfactory or better

#### **Additional Information:**

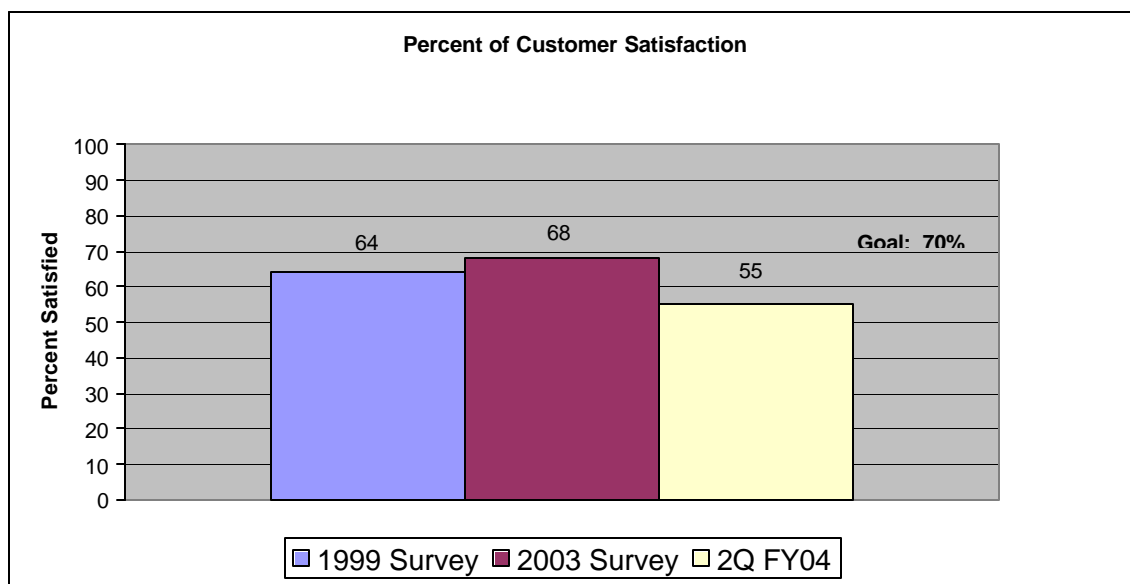
Information for this performance measure was collected from Missouri citizens and MoDOT customers in three separate surveying efforts. The department's Customer Survey 2003, conducted spring/summer 2003, will serve as the primary data source (68 percent satisfaction). The baseline is based on data collected by the Constituent Service Quality Survey (64 percent satisfaction), conducted in 1999. Data gathered by Customer Service representatives via telephone interviews each quarter will supplement this initial information, but the CSC-generated data is not gathered scientifically nor is it as reliable or accurate as the statewide surveys.

**Desired Trend:**



**Results:** ● (Y) Data from 2003 Annual Survey reflects 68 percent satisfaction

**Last Update:** 01/2004



## ***Build Public Trust***

### ***Percent of funding level target utilized by programmed projects by category for the current year of the STIP***

#### **Strategic Goal:**

Demonstrate responsible use of taxpayers' money

#### **Performance Goal/Target:**

The funds programmed for "Taking care of the system" and "Statewide rural major projects"  $\geq 95\%$  of their respective established targets and total funds programmed between 95% and 105% of the total established target.

**Desired Trend:** "Taking care of the system" and "Statewide rural major projects"  $\geq 95\%$  of Target and Total Programmed Projects  $\geq 95\%$  and  $\leq 105\%$  of Total Target.

**Results:** ● (G)  $\geq 95\%$  and  $95\% \leq \text{Total} \leq 105\%$

**Last Update:** 10/2003

Green - "Taking care of the system" and "Statewide rural major projects" programmed funding level  $\geq 95\%$  of their respective established targets and total programmed funding level  $\geq 95\%$  and  $\leq 105\%$  of the total established target.

Yellow - "Taking care of the system" and "Statewide rural major projects" programmed funding level  $\geq 90\%$  of their respective established targets and total programmed funding level  $\geq 90\%$  and  $\leq 110\%$  of the total established target.

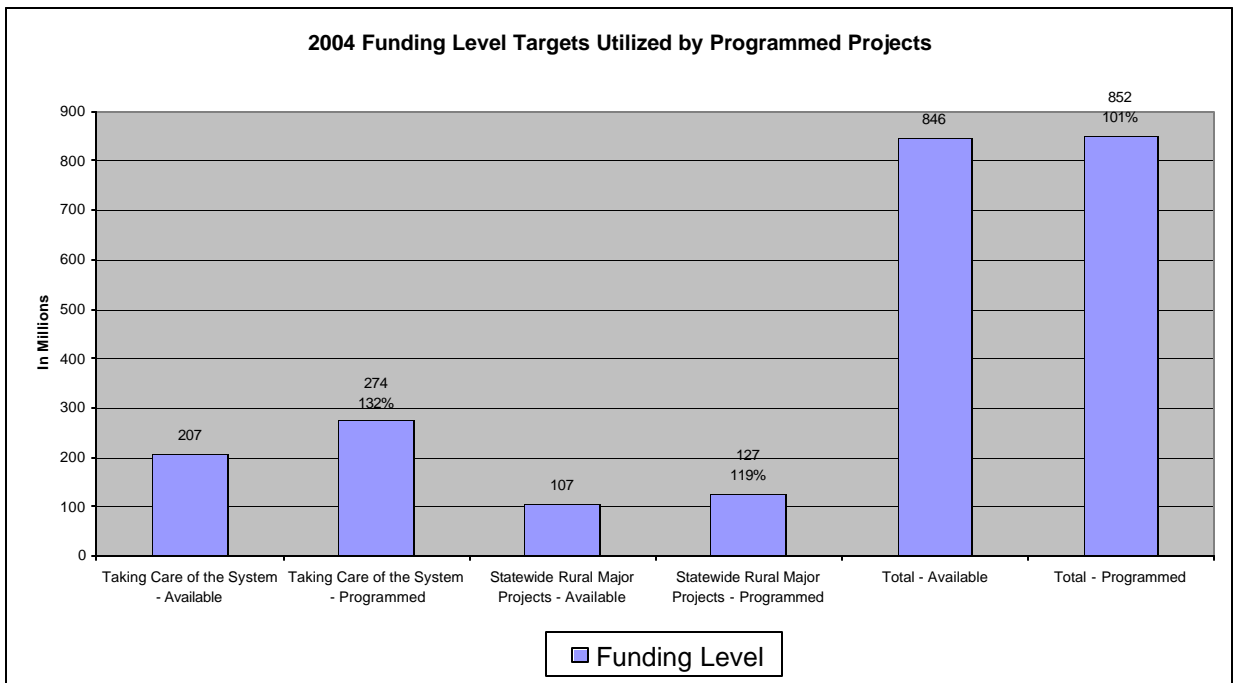
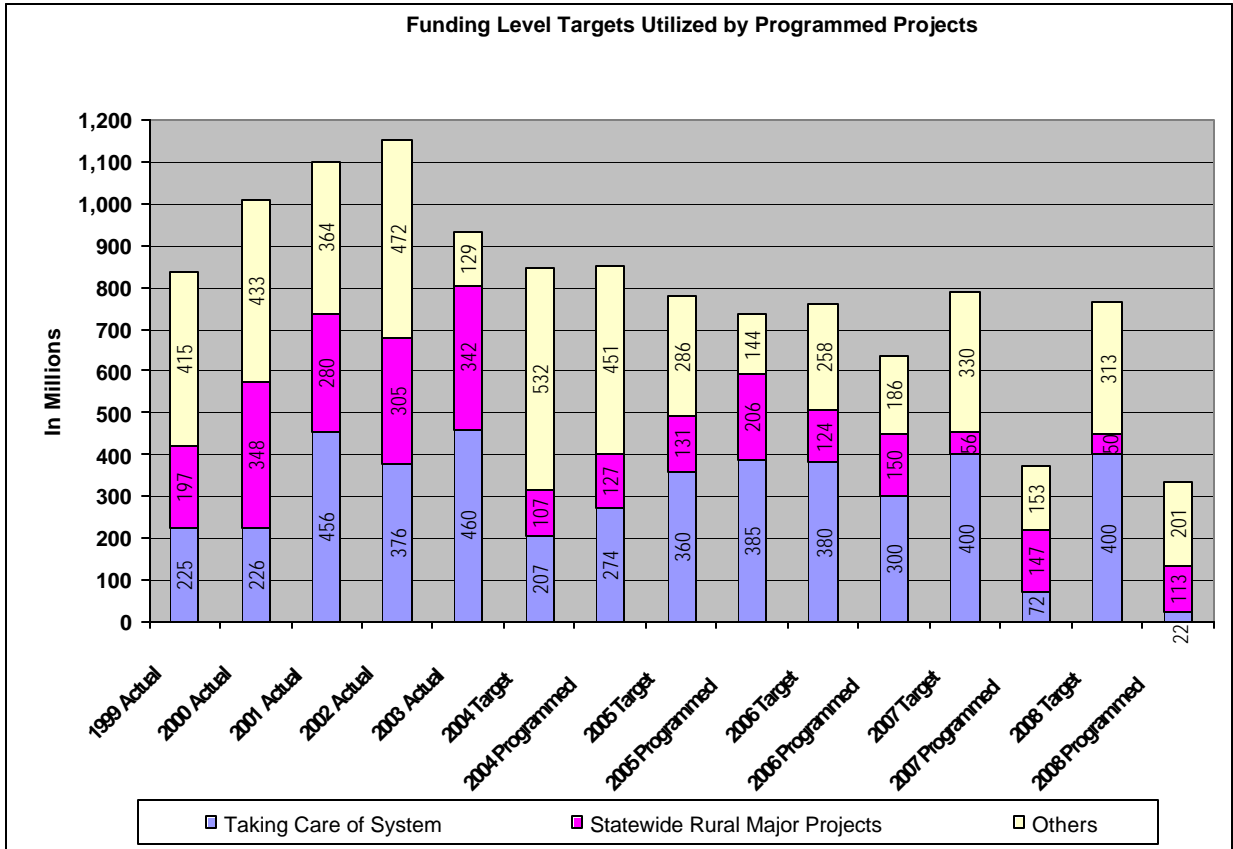
Red - "Taking care of the system" and "Statewide rural major projects" programmed funding level  $\geq 85\%$  of their respective established targets and total programmed funding level  $\geq 85\%$  and  $\leq 115\%$  of the total established target.

#### **Performance Measures:**

Percent of funding level target utilized by programmed projects by category for the current year of the STIP

**Additional Information:** Performance data shown on the following page is for the 2004-2008 STIP.





## Build Public Trust

### *Distribution of funds*

#### **Strategic Goal:**

Demonstrate responsible use of taxpayers' money

#### **Performance Goal/Target:**

More dollars will be spent on maintenance and construction of our transportation system than other activities.

**Desired Trend:** Construction and Maintenance expenditures will comprise the largest dollars of the expenditures of the department.

**Results:** ● (G) Construction and maintenance expenditures continue to comprise the largest expenditures of the department.

**Last Update:** 06/30/2003

Green - The ratio of construction and maintenance expenditures is more than 1.5:1 of other appropriations.

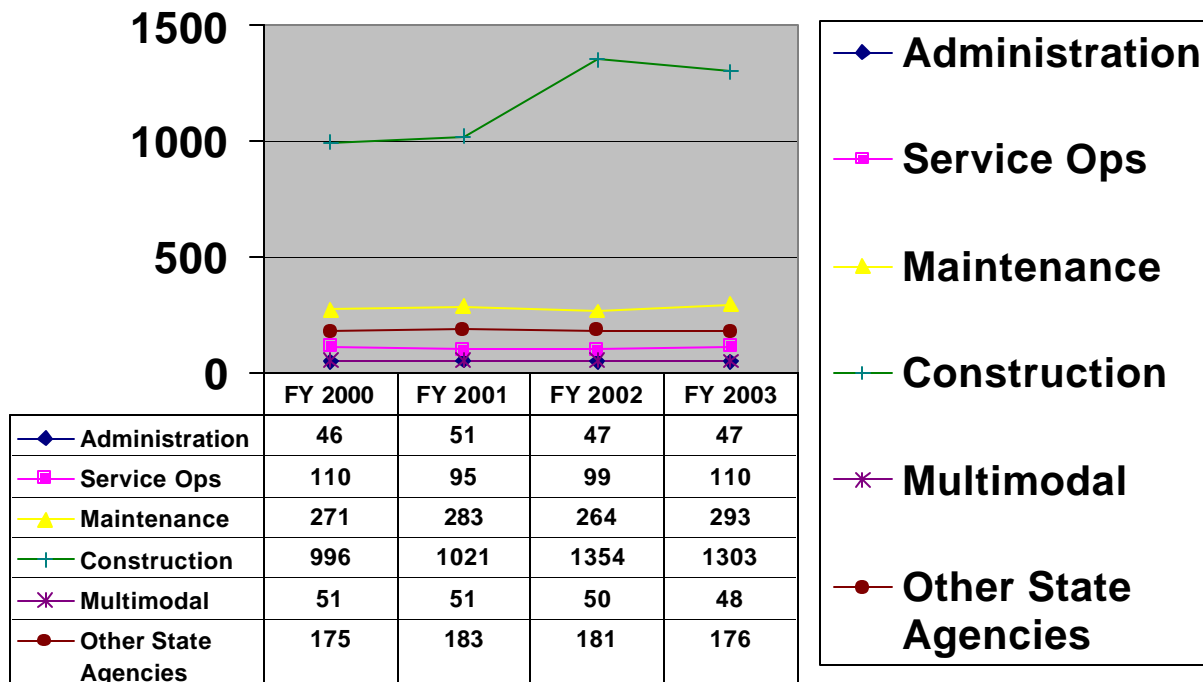
Yellow - The ratio of construction and maintenance appropriation expenditures is more than 1.25:1 of other appropriations.

Red - The ratio of construction and maintenance appropriation expenditures is less than 1.25:1 of other appropriations.

#### **Performance Measures:**

Distribution of funds

#### **Additional Information:**



## Build Public Trust

### *Revenue dispersion*

#### **Strategic Goal:**

Demonstrate responsible use of taxpayers' money

#### **Performance Goal/Target:**

Awareness of revenue dispersion, which indicates how dependent the department is on revenue sources from other entities or revenues requiring voter approval

**Desired Trend:** Revenue dispersion will remain relatively constant.

**Results:** ● (G) Revenue dispersion remains relatively constant.

**Last Update:** 06/30/2003

Green - Revenue dispersion remains relatively constant

Yellow - Revenue dispersion includes consistent declines in sources of funds

Red - Revenue dispersion includes significant declines in one or more sources of funds

#### **Performance Measures:**

Revenue dispersion

#### **Additional Information:**

